

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of)
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U.S. Patent No. 5,971,673 to) Group Art Unit: Unassigned
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Mattias BERGLUND et al.) Examiner: Unassigned
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Application No.: Unassigned)
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Filed: Herewith)
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For: TWO-PIECE ROTARY METAL-)
CUTTING TOOL AND METHOD)
FOR INTERCONNECTING THE)
PIECES)

PRELIMINARY AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to examination on the merits, please amend the above-identified application as follows.

IN THE CLAIMS:

Please cancel claims 7 and 9.

Please amend claims 11, 12 and 14 as follows:

11. (Amended) A cemented carbide cutting portion adapted to be connected to a tool body for rotary metal cutting, comprising a front cutting surface having at least one cutting edge, a rear support surface, and at least one chip flute formed in a side surface of the cutting portion for guiding cuttings, said cutting portion including coupling means

defining a dovetail-shaped projection and forming part of a bayonet coupling adapted to connect a tool body with the cutting portion with an elastic slide fit.

12. (Amended) A cutting portion adapted to be connected to a tool body for rotary metal cutting, comprising a front cutting surface having at least one cutting edge, a rear support surface, and at least one chip flute formed in a side surface of the cutting portion for guiding cuttings, said cutting portion including coupling means defining a dovetail-shaped projection and forming part of a bayonet coupling adapted to connect a tool body with the cutting portion. [The cutting portion according to claim 11] wherein the coupling means comprises a recess extending circumferentially less than 60 degrees.

13. (Amended) A rotary drill comprising:
a drill body having a longitudinal axis and first and second opposed ends, one of said opposed ends comprising a centrally disposed dovetail-shaped recess, and at least two circumferentially spaced projections, each of said projections having a stop surface;

a replaceable cemented carbide drilling head having first and second opposed ends, one of said opposed ends comprising a cutting portion, and the other of said opposed ends comprising a dovetail-shaped projection, said drilling head further comprising at least one stop surface;

wherein the dovetail-shaped projection mates with the dovetail-shaped recess with an elastic slide fit, thereby releasably connecting the drilling head to the drill body.

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14. (Amended) A method of attaching a drilling head to a drill body, said drill body having a longitudinal axis and first and second opposed ends, one of said opposed ends comprising a centrally disposed dovetail-shaped recess, and at least two circumferentially spaced projections, each of said projections having a stop surface; said drilling head made of cemented carbide and having first and second opposed ends, one of said opposed ends comprising a cutting portion, and the other of said opposed ends comprising a dovetail-shaped projection, said drilling head further comprising at least one stop surface; wherein said method comprises:

inserting said dovetail-shaped projection into said dovetail-shaped recess; and

rotating said drilling head relative to said drill body such that an elastic slide fit is formed between the drilling head and the drill body, and the at least one stop surface on said drilling head comes into engagement with at least one of the stop surfaces on one of the projections.

Please add the following new claims:

(New) 16. A rotary metal-cutting tool comprising, in combination, a tool body and a cutting portion attached to the tool body:

the tool body comprising a shank portion defining a longitudinal center axis and rear chip flutes formed in an external side surface for guiding chips rearwardly during a cutting operation;

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the cutting portion comprising a front cutting surface and front chip flutes formed in a side surface of the cutting portion and intersecting the cutting face to form cutting edges therewith;

the tool body and cutting portion being interconnected by a dovetail-shaped bayonet coupling formed by projections disposed on one of the tool body and cutting portion, and recesses formed in the other of the tool body and cutting portion, the projections being circumferentially offset with respect to the flutes and extending generally longitudinally, the recesses extending circumferentially from respective flutes, the flutes sized to longitudinally receive respective projections during longitudinal insertion or removal of the cutting portion relative to the tool body, the cutting portion being rotatable about the center axis relative to the tool body to transfer the projections from the respective flutes into the recesses with an elastic slide fit, while bringing the front and rear flutes into mutual alignment.

(New) 17. The tool according to claim 16, wherein the elastic slide fit produces elastic deflection of the projections.

(New) 18. A rotary metal-cutting tool comprising, in combination, a tool body and a cutting portion attached to the tool body:

the tool body comprising a shank portion defining a longitudinal center axis and rear chip flutes formed in an external side surface for guiding chips rearwardly during a cutting operation;

the cutting portion comprising a front cutting surface and front chip flutes formed in a side surface of the cutting portion and intersecting the cutting face to form cutting edges therewith;

the tool body and cutting portion being interconnected by a dovetail-shaped bayonet coupling formed by projections disposed on one of the tool body and cutting portion, and recesses formed in the other of the tool body and cutting portion, the projections being circumferentially offset with respect to the flutes and extending generally longitudinally, the recesses extending circumferentially from respective flutes, the flutes sized to longitudinally receive respective projections during longitudinal insertion or removal of the cutting portion relative to the tool body, the bayonet coupling further comprising a first oblique surface and a second oblique surface, the cutting portion being rotatable about the center axis relative to the tool body to transfer the projections from the respective flutes into the recesses with an elastic slide fit between the first and second oblique surfaces, while bringing the front and rear flutes into mutual alignment.

(New) 19. The tool according to claim 18, wherein the elastic slide fit produces elastic deflection of the projections.

R E M A R K S

Entry of the foregoing is respectfully requested prior to examination on the merits.

The claims have been amended consistent with, and in support of, Applicants' request for Reissue of U.S. Patent No. 5,971,673.

An early and favorable action on the merits is earnestly solicited. The Examiner is invited to contact the undersigned to discuss any aspect of the present application with the goal of expediting prosecution thereof.

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Date: June 12, 2001